

WHAT IS CLAIMED IS:

1. A receiving apparatus in a communication system in which voice code is divided into a plurality of classes, the voice code in each class is expressed by a number of bits that conforms to a prescribed bit rate, a check code of a fixed length is attached to voice code of one class, the voice code of each class is subjected to error-correction encoding processing, and voice code that has undergone error-correction encoding processing in each class is transmitted upon being multiplexed in such a manner that the class with the attached check code is brought to the forefront, comprising:
 - a bit-rate candidate holding unit for holding a plurality of bit-rate combination candidates of each of the classes;
 - a decoding processing unit for applying error-correction decoding processing to receive data corresponding to the class with the attached check code on the assumption that the voice code of the class with the attached check code is expressed by a number of bits that conforms to the bit rate of the class with the attached check code in each of the bit-rate combination candidates;
 - investigating means for investigating whether result of decoding is correct using the check code; and a bit-count discriminating unit which, when it is judged by said investigation that the result of decoding is correct, is for discriminating that the numbers of bits conforming to the bit rates of each of the classes in the bit-rate combination candidate prevailing at this time are a numbers of bits that express the voice codes of each of the classes.
2. A receiving apparatus according to claim 1, further comprising:
 - means for applying error-correction decoding processing to classes other than the class with the attached check code, based upon the discriminated numbers of bits of the voice codes of each of the classes; and

a voice reconstruction unit for reconstructing a voice signal using the voice codes of each of the classes.

3. A receiving apparatus according to claim 1, further
5 comprising a storage unit which, when it is judged by said investigation that the result of decoding is correct, is for storing the bit-rate combination candidate that prevails at this time;

wherein when the voice code of each of the classes
10 is demultiplexed from receive data and input to a voice reconstruction unit every transmission time interval, said decoding processing unit applies error-correction decoding processing to the receive data on the assumption that the voice code of the class with the attached check code is expressed by a number of bits that conforms to the bit rate of the class with the attached check code in the bit-rate combination candidate that has been stored in said storage unit; and when it has been clarified by the investigation of
15 the check code that the result of decoding is incorrect, said decoding processing unit applies error-correction decoding processing to the receive data on the assumption that the voice code of the class with the attached check code is expressed by a number of bits that conforms to the bit rate of the class with the attached check code in another bit-rate combination candidate until the result of decoding is correct.

4. A receiving apparatus according to claim 1, further comprising a silence state monitoring unit for
30 monitoring whether a silence state has continued for a prescribed number of times;

wherein when the voice code of each of the classes is demultiplexed from receive data and input to a voice reconstruction unit every transmission time interval,
35 said decoding processing unit applies error-correction decoding processing to the receive data on the assumption that the voice code of the class with the attached check code is expressed by a number of bits that conforms to the bit rate of the class with the

attached check code in a predetermined bit-rate combination candidate if the silence state has continued for the prescribed number of times; and when it has been clarified by the investigation of the check
5 code that the result of decoding is incorrect, said decoding processing unit applies error-correction decoding processing to the receive data on the assumption that the voice code of the class with the attached check code is expressed by a number of bits
10 that conforms to the bit rate of the class with the attached check code in another bit-rate combination candidate until the result of decoding becomes correct.

5. A receiving apparatus , comprising:

receiving means for receiving a signal that has
15 been modulated by variable-length data that includes error-detection data;

error detecting means for selecting a plurality of data-length candidates in order, extracting an amount equivalent to the selected data length with
20 regard to a demodulated signal and performing error detection using the error-detection data;

and data length determination means for determining a candidate of a data length as a data length of the variable length in a case where an error
25 could not be detected by said error detecting means, wherein characterized in that:

said data length determination means determines, as the data length of the variable length, a candidate of an initial data length for which an error could not
30 be detected by said error detecting means.

6. A receiving apparatus according to claim 5, wherein the variable-length data comprises data that includes any of voice-activity data, silence data and background-noise data having different data lengths,
35 and error-detection data, the data being generated successively based upon call voice; and

said error detecting means adopts the candidate of the data length of variable data length determined by said data length determination means as a candidate of

data length initially selected with regard to following variable-length data received next.

7. A receiving apparatus according to claim 6, wherein said successive generation is generated on the order of
5 milliseconds.

8. A receiving apparatus according to claim 6, wherein the variable-length data comprises data that includes any of voice-activity data, silence data and background-noise data having different data lengths,
10 and error-detection data, the data being generated successively, in accordance with a prescribed rule, based upon call voice; and

15 said error detecting means decides the order of candidates of data lengths, which are selected with regard to following variable-length data, upon referring to the history of candidates of data lengths of variable length, which have been determined by said determination, and said prescribed rule.

9. A receiving method in a CDMA communication system
20 in which voice code of a prescribed transmission time interval is divided into a plurality of classes, the voice code in each class is expressed by a number of bits that conforms to a prescribed bit rate, a check code of a fixed length is attached to voice code of one
25 class, the voice code of each class is subjected to error-correction encoding processing, and voice code that has undergone error-correction encoding processing in each class is transmitted upon being multiplexed in such a manner that the class with the attached check
30 code is brought to the forefront, comprising steps of:

holding a plurality of bit-rate combination candidates of each of the classes;

35 applying error-correction decoding processing to receive data corresponding to the class with the attached check code on the assumption that the voice code of the class with the attached check code is expressed by a number of bits that conforms to the bit rate of the class with the attached check code in each of the bit-rate combination candidates;

- investigating whether result of decoding is correct using the check code and, when it is judged by said investigation that the result of decoding is correct, discriminating that the numbers of bits
- 5 conforming to the bit rates of each of the classes in the bit-rate combination candidate prevailing at this time are a numbers of bits that express the voice codes of each of the classes, and ending processing for discriminating the number of bits;
- 10 applying error-correction decoding processing to classes other than the class with the attached check code, based upon the discriminated numbers of bits of the voice code of each of the classes; and reconstructing a voice signal using the voice code
- 15 of each of the classes.
10. A receiving method according to claim 9, wherein when it has been clarified by the investigation of the check code that the result of decoding is incorrect, error-correction decoding processing is applied to the
- 20 receive data on the assumption that the voice code of the class with the attached check code is expressed by a number of bits that conforms to the bit rate of the class with the attached check code in another bit-rate combination candidate until the result of decoding is
- 25 correct.
11. A receiving method according to claim 11, further comprising steps of:
- when it has been clarified by said investigation that the result of decoding is correct, storing the
- 30 bit-rate combination candidate prevailing at this time; and
- when the voice code of each of the classes is demultiplexed from receive data and input to a voice reconstruction unit every transmission time interval,
- 35 applying error-correction decoding processing to the receive data on the assumption that the voice code of the class with the attached check code is expressed by a number of bits that conforms to the bit rate of the class with the attached check code in the bit-rate

combination candidate that has been stored.

12. A receiving method according to claim 10, further comprising steps of:

monitoring whether a silence state has continued

5 for a prescribed number of times; and

when, if the silence state has continued for the prescribed number of times, the voice codes of each of the classes are demultiplexed from receive data and input to a voice reconstruction unit every transmission

10 time interval, applying error-correction decoding processing to the receive data on the assumption that the voice code of the class with the attached check code is expressed by a number of bits that conforms to the bit rate of the class with the attached check code

15 in a bit-rate combination candidate that conforms to background noise.